

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number
WO 2004/058729 A1

(51) International Patent Classification⁷: **C07D 237/24**,
401/04, 401/12, 413/04, 417/04, 403/04, 409/12, A61K
31/501, A61P 37/08

Navas, 5, 4° 2a, E-08004 Barcelona (ES). **GIOVANNONI, Maria, Paola** [IT/IT]; Via Ponte di Formicola 91, I-50018 Scandicci (IT). **VERGELLI, Claudia** [IT/IT]; Via Boccaccio 11, I-50012 Grassano (IT).

(21) International Application Number:

PCT/EP2003/014722

(74) Agent: **SRINIVASAN, R., C.**; J.A. Kemp & CO., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).

(22) International Filing Date:

22 December 2003 (22.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

P200203003 26 December 2002 (26.12.2002) ES

(71) Applicant (for all designated States except US): **ALMIRALL PRODESFARMA SA** [ES/ES]; Ronda del General Mitre 151, E-08022 Barcelona (ES).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DAL PIAZ, Vittorio** [IT/IT]; Via Poggio Ugolino 7/A, I-50015 Impruneta (IT). **AGUILAR IZQUIERDO, Nuria** [ES/ES]; C/Espronceda 31-37, Esc. 2 4° 3a, E-08005 Barcelona (ES). **BUIL ALBERO, Maria Antonia** [ES/ES]; C/Paris 50, 1° 4a, E-08029 Barcelona (ES). **CARRASCAL RIERA, Marta** [ES/ES]; P° Sant Gervasi 1, 3° 2a, E-08022 Barcelona (ES). **GRACIA FERRER, Jordi** [ES/ES]; Plaza de las

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

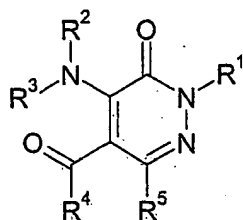
(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NEW PYRIDAZIN-3(2H)-ONE DERIVATIVES



(I)

(57) Abstract: Pyridazin-3(2H)-one derivatives of formula (I) are found to inhibit PDE-4, wherein R¹, R² and R⁴ are organic radicals, R³ is a cyclic group, and R⁵ is an ester or an aryl or heteroaryl group.

WO 2004/058729 A1